

Streaked Shearwater (*Calonectris leucomelas*) off Kaua'i: A Second Hawai'i Record

by Steven G. Mlodinow¹

On 22 April 2000, Stephen Pink and I hired Open Sea Charter Fishing out of Port Allen, Kaua'i, for a day's sea birding. Not long after leaving port, we entered an enormous flock of Wedge-tailed Shearwaters (*Puffinus pacificus*). About an hour later, we were 1.5 miles off Salt Pond County Park, Hanapepe, and as far as we could see there were Wedge-tailed Shearwaters along with some Sooty Terns (*Sterna fuscata*), noddies, boobies, etc. The ocean had moderate swell and chop. The lighting, in general, was quite good with weak sunshine penetrating high clouds. As we trolled through the flock, a very different bird became apparent. It was a shearwater with a white head.

I immediately thought, "Streaked Shearwater." That strong impression was quickly tempered by my recollection of aberrant Pink-footed Shearwaters (*Puffinus creatopus*) and Black-vented Shearwaters (*Puffinus opisthomelas*) that I have seen in the past - individuals that otherwise looked normal but had fully or partially white heads. Checking for other marks, I noted that the bird was clearly larger than the nearby Wedge-taileds, the white head was actually streaked, and the bill was almost entirely pale - all charac-

teristic of Streaked Shearwater.

I then pointed out the bird to Steve Pink, who then found it quickly. The captain slowly moved the boat towards the bird. Fortunately, the sun was behind us as was the swell. We got as close as 40



Streaked Shearwater

feet before the bird flew a short ways. We again approached to about this distance, only to have the bird fly a couple hundred yards off. We turned to pursue, and the bird flew far away into the swirling masses of Wedge-taileds. Despite our efforts to track this bird, we got only one additional distant glimpse. Overall, we had the Streaked Shearwater in good view for about four minutes, and during the great majority of this time, the bird was seated upon the water.

Description

This was a shearwater that appeared large and bulky with a rather blocky head

and thick neck when compared with the nearby Wedge-tailed Shearwaters. Its underparts were entirely white, excepting a bit of dark spilling from the nape onto the sides of the neck. The head was white with crisp dark streaks on the face, mid-crown and rear crown, growing heavier towards the rear and coalescing into a solidly dark hindneck. The bill was pale horn-color with a very small dusky tip. When seated, the back/folded wing coloration was not closely noted (as I was trying to be very very sure about the head and bill pattern) but seemed generally similar to that of a light-phase Wedge-tailed Shearwater. When the bird took off, a dark tail, clearly shorter than that of a Wedge-

tailed Shearwater, was noted. The rump/uppertail covert pattern was not observed.

In flight, the bird flew rather heavily - like a Pink-footed or Cory's Shearwater (*Puffinus griseus*). The underwing coverts were clean white including the axillaries, unlike a Pink-footed or Wedge-tailed. The secondaries formed a contrasting dark trailing edge. The underwing primary coverts were not well observed, but they did not have a dramatic dark mark, as shown by some Streakeds. However, some marking could well have been present there. For instance, see Harrison (1987). The mark shown by the

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bird in plate 216 was not present, but the pattern exhibited by the bird in plate 215 fit what we saw. The back and upperwing coverts appeared much like a light-phase Wedge-tailed Shearwater, but perhaps a bit grayer. The upper surface of the secondaries seemed almost silver at times. The upper primary coverts and primaries appeared dark. In flight, the bird continued to appear significantly larger than the Wedge-taileds in length, wingspan, and bulk.

Identification

The Streaked Shearwater is truly one of the most distinctive shearwaters extant, and our bird fit the description of Streaked Shearwater well, with the proper head pattern, bill pattern, flight style, and wing pattern. Notably, the pale gray flash on our bird's secondaries is not shown in most guides and troubled us a bit initially, but is shown by several birds on p. 77, plate 2, in Enticott and Tipling (1997) and by the bird on p. 110 of Kanouchi et al. (1998). Indeed, that is a mark that I

have not seen on any other shearwater.

The potential identification quandary is with a partially leukistic individual of another species. Wedge-tailed Shearwater clearly needs to be considered as it is the dominant species off Kaua'i. An odd Wedge-tailed, however, is eliminated by shape, size, and bill color among other features. Perhaps the Pacific shearwater closest in structure and plumage to Streaked Shearwater is Pink-footed Shearwater. A variant of this species is eliminated by underwing pattern. Also, a Pink-footed Shearwater should have a more extensive dark tip to a more clearly pink bill, and even an aberrantly pale-headed bird would be very unlikely to have such a clearly defined head streaking.

Range and Vagrancy in Streaked Shearwater

The only previous Streaked Shearwater record for Hawai'i came from Laysan Island on 2 August 1989 when one was found on the beach and photographed (HRBP-848 to 853). This species breeds (March-November) mostly

in Japan, eastern China, and Korea, with a total world population of several million birds (Enticott and Tipling 1997). During winter, Streaked Shearwaters are found in the western Pacific from Japan south to southern Australia, though the bulk of the population winters off New Guinea. They are also thought to wander, perhaps regularly, into the Indian Ocean (Harrison 1983, Enticott and Tipling 1997). Vagrants have been recorded at least seven times in southern India and Sri Lanka (Grimmett et al. 1999), Seven times in California (Small 1994), once off Oregon (Nehls 1999), twice off South Africa (J. Rossouw, pers. comm.), and twice in southernmost Israel (Shirihai 1996). The California and Oregon records have fallen entirely between 17 August and 14 October (Small 1994), and the South African birds were both in September (J. Rossouw, pers. comm.), but the Israeli birds were first located in May and June (Shirihai 1996). These vagrant records show that this species can wander great distances and be found at different times of year. Some of this tendency

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to vagrate widely is felt to be due to individuals associating with flocks of more highly migratory species (Snow and Perrins 1998).

Conclusion

On 22 April 2000, we had the great fortune of finding a Streaked Shearwater off Kaua'i, Hawai'i, and obtaining quality views, thus providing the A.O.U. area

with its tenth record and Hawai'i with its second. The Streaked Shearwater's arrival near Kaua'i is likely related to the impressive concentration of shearwaters off Kaua'i this April, and it is conceivable that this bird traveled to Hawaiian waters in the company of these Wedge-tailed Shearwaters. Given the Streaked Shearwater's tendency towards vagrancy, future Hawai'i records are not unlikely.

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RE: Finding of No Significant Impact for the Commercial Timber Harvest at Waiakea Timber Management Area, Island of Hawai'i

In May 1999, the State of Hawaii's Division of Forestry and Wildlife (DOFAW) completed an environmental assessment for the commercial timber harvest of 12,000 acres in the Waiakea Timber Management Area (WTMA) on the island of Hawaii. Despite the inadequacy of biological surveys, DOFAW declared the project would not have any significant impacts on endangered species, nor would it have considerable cumulative adverse effects. To the contrary, the Hawaii Audubon Society believes the project may impact endangered species, particularly the Hawaiian hoary bat. Moreover, the proposed action at the WTMA seems linked to the overall establishment of a forestry industry, which involves the establishment of a mill and the logging of additional parcels of state land. We believe the cumulative effects of logging on all state lands on the Big Island and the establishment of a mill should be addressed in one environmental document pursuant to Hawaii Administrative Rule 11-200-5(a). Therefore, we submitted the letter below to the State's Environmental Council urging the Council to make known our concerns to the director of the Office of Environmental Quality Control (the agency tasked with approving environmental assessments). The Council's response is reprinted following our letter.

Introduction

We are writing to express our concern about the finding of no significant impact (FONSI) for the Commercial Timber Harvest at Waiakea Timber Management Area, Island of Hawai'i (henceforth referred to as the WTMA project). We believe the issuance of a FONSI is inappropriate for two reasons. First, cumula-

tive impacts of timber harvesting at the landscape level were ignored because the state agency involved (the Department of Land and Natural Resources' Division of Forestry and Wildlife) failed to consider the effects of other timber harvesting projects being proposed by the State and private landowners. Second, the mitigation measures for impacts

to endangered species are inappropriate. We believe these significant oversights invalidate the Environmental Assessment (EA).

According to the Hawai'i Revised Statutes (Ch. 341-6) the Environmental Council serves as a liaison between the director of the Office of Environmental Quality Control (OEQC) and the general

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public. It is also recognized that the Council "may make recommendations concerning ecology and environmental quality" to the director of OEQC. It is our hope that the Council will consider the issues raised in this letter and make the following recommendations to the director of OEQC:

1. encourage the Department of Land and Natural Resources (DLNR) to withdraw its determination of a finding of no significant impact for commercial timber harvesting at Waiakea Timber Management Area;
2. advise DLNR to avoid segmentation of forestry projects (e.g. actions leading to timber harvesting at Waiakea and Hamakua);
3. advise all state agencies involved in forestry projects (i.e. the Department of Business and Economic Development, the Department of Labor and Industrial Relations, the Department of Agriculture, the Department of Hawaiian Home Lands, the Department of State Parks, and especially DLNR's Division of Forestry and Wildlife [DOFAW] and the Land Division) to prepare an Environmental Impact Statement for the creation of a forest industry; and
4. advise DOFAW to require that any potential timber contractor consults with the US Fish and Wildlife Service regarding incidental take of endangered species, introduction of invasive species, and threats to terrestrial invertebrates and stream life on state lands.

Issue 1: WTMA project is a commitment to a larger action; cumulative impacts are ignored. Commitment to a larger action

In DOFAW's *Notice of Determination* (letter to OEQC dated June 29, 1999), Jon Giffin stated that the WTMA project will not have considerable cumulative adverse effects. As a result the agency issued its project a FONSI. However, according to the significance criteria listed in Hawaii Administrative Rules 11-200-12(8), "an action shall be determined to have a significant effect on the environment if it is individually limited but cumulatively has considerable effect upon the environment or involves a commitment for larger actions." DOFAW ignores the topic of a commitment to a larger action in its *Notice of Determination*. Thus, the issuance of the FONSI is

in clear violation of Hawai'i's Administrative Rules.

Evidence indicates that the WTMA project is indeed a phase or increment of a larger undertaking - the larger undertaking being the establishment of an economically viable forest industry in Hawaii. The "project Action Summary" section of the final environmental assessment for the WTMA (page 3, paragraph 2) declares "the State's goal is to assist in the creation of a sustainable forest industry." This disclosure provides an undeniable connection to a larger undertaking.

Furthermore, a report entitled *Market Research on Commodity Wood Products for 8 Non-Native, Hawaiian Grown Timber Species* (funded by the State's Hawaii Community Forestry & Communities Initiative) states on page 35 that "the current Waiakea resource alone may not support a sawmill which is commercially viable" and that "if it's possible to combine the Waiakea and Hamakua resources, the situation would change significantly." This also affirms the connection to a larger undertaking.

Cumulative impacts ignored

According to HAR 11-200-5(a), "For all proposed actions which are not exempt, the agency shall assess at the earliest practicable time the significance of potential impacts of its actions, including the overall, cumulative impact in light of related actions in the region and further actions contemplated."

"Cumulative impact" as defined in HAR 11-200-2 means,

"the impact on the environment which results from the incremental impact of the action when added to other past, present, and reasonably foreseeable future actions regardless of what agency or person undertakes such other actions. Cumulative impacts can result from individually minor but collectively significant actions taking place over a period of time."

In the final environmental assessment for the WTMA, a number of "related actions in the region and further actions contemplated" were not revealed. In addition to the logging of the WTMA's 12,000 acres, logging in windward Hawai'i is planned for:

State-owned

- DOFAW's Hamakua Timber Management Area (ca. 4,000 acres)
- the Land Division's forested parcels

(ca. 1,400 acres)

- Department of Hawaiian Homeland's forested parcels (ca. 1,000 acres)
- a portion of the State Parks' forest at Kalopa (10 acres)

Private

- PruTimber's forests (ca. 16, 000 acres)
- Kamehameha Schools' forests (estimate unavailable)
- MaunaKea Agribusiness' forests (estimate unavailable)
- C. Brewer's forests (estimate unavailable).

DOFAW's segmented approach fails to consider the cumulative impacts of forestry operations at the landscape level. We believe DOFAW should complete a supplemental environmental impact statement (EIS) for the windward Hawai'i region, if not the entire island of Hawai'i. This EIS should include an analysis of the amount of forest acreage that will be harvested over space and time. Maximum annual impacts (MAI) need to be clearly stated for each type of forestry activity, such as clearcutting, thinning, chemical application, and road development/maintenance. Disclosure of MAIs is standard practice in national forests.

Bats

The Hawaiian hoary bat (*Lasiurus cinereus semotus*) is on both the federal and state lists of endangered species. Endangered species are afforded certain protections under the federal Endangered Species Act and Ch. 195D of the Hawaii Revised Statutes.

Impacts to endangered species are supposed to be identified in a project's EA. In the *Notice of Determination*, DOFAW contends that impacts to the native bat population are "expected to be minimal," however, the agency falls short of supporting that expectation with evidence. DOFAW's argument hinges on the small percentage of acreage to be impacted, i.e. "the Waiakea Timber Management area represents less than three percent of the forest reserve acreage managed by DOFAW on the island of Hawaii." What DOFAW fails to consider is the importance of low elevation forests (i.e. forests under 4,000 ft) to breeding bats.

On the island of Hawai'i there is a

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temperature gradient associated with the elevational gradient. Thus, it is generally warmest at the lower elevations. Several lines of evidence suggest warm temperatures are critical to the breeding success of many species of bats. Specifically, female bats seem to require warm areas when they are pregnant and rearing young. Warm temperatures promote fetal and juvenile growth in insectivorous bats of this family (the Vespertilionidae). If it is too cold the embryos may be resorbed. And, bat pups - which are born furless - will freeze to death if it is too cold.

While there are no precise location records of Hawaiian hoary bat pups, the records of hoary bat pup locations from North and South America show that pups occur where average nighttime temperatures are above 50F. On the island of Hawai'i, this temperature regime corresponds roughly with 4,000 feet and below. And, indeed, we have many records of pregnant and lactating Hawaiian hoary bats below 4,000 ft on the island of Hawai'i.

It is these low elevation forests that are most threatened with alteration or destruction. Presently, the burgeoning forest industry is the greatest threat the bat faces because most of the areas slated for logging are below 4,000 feet. Moreover, as former sugar land is converted to tree farms, the trees slated to be cut may become "attractive hazards" to the bats. True, the more trees planted, the more potential roosts and that's a good thing. But, the rate of harvest may exceed the ability of the system to recover. That is, trees may not be planted fast enough across the landscape to balance out the habitat that was removed.

For the island of Hawai'i, we estimate that DOFAW's low elevation holdings in forest reserves comprise approximately 120,000 acres. Thus by logging the 12,000 acres at Waiakea, DOFAW is impacting about 10% of its acreage in the low elevation forest reserves. This is a nontrivial amount of DOFAW's low elevation forest reserves. (The percentage increases if we add DOFAW's Hamakua Timber Management Area acreage.)

We believe the cumulative impacts of commercial timber harvesting on state and private forests and the potential impact to the Hawaiian hoary bat needs to be estimated within the context of: (1) the

remaining surrounding landscape that provides suitable foraging and roosting habitat, especially during the critical breeding season, (2) the conservation measures incorporated into forest management plans to minimize the impact of tree removal, (3) the terms and conditions associated with the reasonable and prudent measures provided by the US Fish and Wildlife Service in their biological opinions, and (4) the percentage of the region-wide habitat that is predicted to be impacted by the proposed actions.

Other cumulative impacts

Because timber harvesting involves clearing forest canopy and disturbing soil with heavy machinery, forestry activities will exacerbate the spread of invasive species throughout the timber management areas and into adjacent natural areas and wildlife refuges. Seeds of invasive species, such as *Miconia*, can be spread into timber areas by heavy machinery, and the clearing of the forest canopy will release the invasive species seed bank in the cleared areas from competition. These actions will undoubtedly increase distribution and density of the invasive species. Since the State is already struggling to control invasive species with a limited budget, the role that forestry activities would have in accelerating the spread could have catastrophic, landscape-level impacts which the state is not financially prepared to face.

Cumulative impacts can occur as a result of mass feral ungulate movements out of the timber management areas and into adjacent, unfenced natural area reserves, such as the Pu'u Maka'ala Natural Area Reserve. These animal movements will not only increase the overall extent of disturbance, but also facilitate the spread of invasive species into adjacent areas.

An analysis of the cumulative impacts of forestry operations not only to bat breeding habitat, but also to invertebrate populations, and invasive species introductions should be conducted as part of the EIS. Again, this analysis should incorporate a landscape-level approach that includes all forestry operations on state and private land.

Issue 2: Mitigation is inappropriate Bats

When endangered bats are present in

timber harvest areas on the mainland, seasonal restrictions in timber harvesting are often implemented. According to the US Fish and Wildlife Service's Pennsylvania Field Office, when the Pennsylvania Department of Transportation (PennDOT) proposed to cut down trees to develop a new highway in potential habitat of the Indiana bat, the Service "recommended that PennDOT either 1) conduct Indiana bat surveys within the project area during the May 15 to August 15 survey window, or 2) assume that Indiana bats are present within the project area and implement measures to avoid adverse effects." In other words, "an assumption that the Indiana bat exists within the project area can be made and a seasonal restriction applied."

Back in August 1998, DOFAW was alerted to the inadequacy of its Waiakea Forest Management Plan in establishing measures to protect the Hawaiian hoary bat. Specifically the US Forest Service stated "it [the bat] is present in the area and it is listed as endangered, but the plan doesn't indicate how the Division will protect it." The USFS further stated,

"The discussion of the native bat is a 'dead-on-arrival' issue if the plans do not include the Division's plans to monitor and mitigate effects. In the case of WTMA, the ope'ape'a could become Hawai'i's version of the spotted owl. The Division doesn't want to go down that road".

Subsequently DOFAW incorporated some measures it felt would protect the bat into the EA for the WTMA, but it developed these mitigation measures without input from bat biologists. Specifically DOFAW's mitigation in the final EA is to (1) protect trees in which bats are seen roosting by establishing a 250 foot buffer around the tree; (2) suspend logging during the breeding season if bats are "proven to breed" at a site; and (3) leave some trees within harvesting units. We believe the first and second proposed mitigation measures are inappropriate for the following reasons.

First, with regard to establishing a 250 foot buffer zone, this is simply too little. For endangered bats on the mainland, the radius is dictated by the known travel distance between roosts and foraging sites. Hence, for the Indiana bat the buffer zone radius is 1.5 miles around the roost tree. Within this buffer zone, no

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logging activities can occur as long as the roost is active. In Hawai'i, reported travel distances between roost sites and foraging areas are as great as 8 miles. Furthermore, it is highly unlikely that hoary bats will be seen at the roost. Unlike the endangered Indiana bat which roosts in colonies, the Hawaiian hoary bat roosts solitarily (or with its young). Solitary individuals are exceedingly difficult to find. According to Theresa Menard, a graduate student studying the Hawaiian hoary bat, there are less than 30 documented reports of roosting bats for the whole state.

Second, with regard to suspending logging during the breeding season, the proof of breeding requirement is unreasonable. According to Theresa Menard (in a letter to DOFAW dated July 29, 1999), proof of breeding in the WTMA "requires finding pre-volant young [i.e. young incapable of flying] in the WTMA." Other types of breeding evidence are circumstantial:

- flying bats observed or detected with bat detectors in the WTMA in June

and July (may be non-breeding bats, i.e. adult males or non-reproductive females);

- flying lactating bats or young mist-netted in the WTMA (could have come from maternity roosts outside the WTMA);
- mothers with young attached that are found on the ground or mist-netted while flying in the WTMA (could have come from maternity roosts outside the WTMA).

To date, there is no proof of breeding in any specific area because there are no records of pre-volant young. Thus, it is unreasonable for DOFAW to hinge mitigation on proof of breeding when such proof has never been obtainable in the past anywhere in the state. We believe effective mitigation for the Hawaiian hoary bat is simply to suspend timber harvesting during the bat's breeding season.

Invasive Species

The WTMA EA states that "DOFAW will monitor any spread of non-native flora that occurs and provide control."

However, the agency has not disclosed the minimum level of effort or the cost to undertake such a program. It seems doubtful that within the financial constraints DOFAW is currently under, the agency can implement an effective monitoring program.

Conclusion

In closing, the Hawaii Audubon Society supports the establishment of a sustainable forestry industry that places Hawai'i's unique and imperiled ecosystems before short-term economic goals. We believe DOFAW should place a greater emphasis on landscape-level planning that coordinates forestry operations and ecosystem management across spatial and temporal scales. A more comprehensive and detailed treatment of the cumulative impacts and mitigation measures, as required by the Hawai'i Environmental Policy Act, would be the first step in this process. We ask the council to consider the legal significance of the issues presented in this letter and make known our requested recommendations to the director of OEQC.

Reply: Text of State of Hawai'i Environmental Council Chairperson William S. Petti's reply of September 11, 2000:

We have received your June 12, 2000, letter concerning the finding of no significant impact for the Commercial Timber Harvest at Waiakea Timber Management Area, Island of Hawai'i. In response to your request that we "consider the legal significance of the issues presented...and make known our requested recommendations to the director of OEQC", Genevieve Salmonson, Director of the Office of Environmental Quality Control and its ex-officio voting member, was given a copy of your letter. Shortly thereafter, she subsequently met with the Environmental Council in quorum assembled at its July 12, 2000, meeting, at which the Council voted 11-0-1 to amend the agenda to include a discussion of your letter.

The Environmental Council consid-

ered the issues raised in your letter, namely, that: (1) OEQC encourage the Department of Land and Natural Resources to withdraw its determination of finding of no-significant impact for commercial timber harvesting at Waiakea; (2) OEQC advise DLNR to avoid segmentation of forestry projects; (3) OEQC advise all State agencies involved in forestry projects to prepare an EIS for the creation of the forest industry; and (4) OEQC advise DOFAW to require that any potential timber contractor consult with the U.S. Fish and Wildlife Service concerning endangered species takings, invasive species introductions, and threats to terrestrial invertebrates and stream life on state lands.

At this meeting, the Environmental Council, with the approval of the Director of Environmental Quality Control, em-

powered me to send out this letter to you acknowledging your concerns. The Council also noted that: any challenges to the finding of no significant impact *should have been filed within the statutorily imposed thirty-day period* (see, Section 343-7, Hawai'i Revised Statutes) following our publication of DLNR's determination in the August 8, 1999, *Environmental Notice*. In a September 5, 2000 conversation with Division of Forestry and Wildlife Administrator Michael Buck, we understand that the Waiakea Timber Project is on hold, pending discussion with the community and technical experts of the proposed Hamakua Timber project. We strongly urge you to contact Mr. Buck directly at (808) 587-0166 to express your concerns.

If you have any questions, please call me or Director Genevieve Salmonson at (808) 586-4185.

As this was going to press, DOFAW just completed a plan to harvest timber from forest reserves in the Hamakua Timber Management Area (HTMA), but the plan had yet to come before the Board of Land and Natural Resources for approval. The Board is scheduled to vote on the plan during its November meeting. Board approval is required prior to the preparation of an environmental assessment for logging in the HTMA.

Gleanings From the Technical Literature : 42nd Supplement to the American Ornithologists' Union Check-list

by Reginald E. David¹

The forty-second supplement to the American Ornithologists' Union Check-list of North American Birds has just been published (American Ornithologists' Union 2000). This is the first supplement to appear following the publication of the 7th edition in 1998.

The committee on classification and nomenclature has adopted several taxonomic and distributional changes that are of specific interest to Hawai'i based birders. Of the 42 changes to the list nine of these address birds reported from Hawai'i, and one change adds a new species that could conceivably be recorded in Hawaiian waters.

Nazca Booby (*Sula granti*) has been split from Masked Booby (*Sula dactylatra*), following the work of Pitman and Jehl. This new species breeds in the eastern Pacific on the Galapagos Islands, Isle La Plata, Ecuador and Malpelo Island, Clipperton Island and the Revillagigedos. It ranges at sea off Middle America in the southern Gulf of California, and from Mexico to Ecuador. Although this species has yet to be recorded in Hawaiian waters the possibility exists that a severe weather system originating in the eastern Pacific could carry this species to Hawai'i. For more specific information and photographs of this new species see Pitman and Jehl (1998) and Roberson (1998).

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Black Kite (*Milvus migrans*) has been added to the U.S. list based on birds seen on Midway in 1994-1995 and 1998. For more information on these sight and photographic records see R. L. Pyle's (1998) *Field Notes* articles.

The *Catharcta* genus has been merged into the genus *Stercorarius* following Andersen (1999). This changes the scientific name of one species of skua known from Hawaiian waters. The South Polar Skua (*Catharcta maccormicki*), becomes (*Stercorarius maccormicki*).

The English name of *Gygis alba* has been changed from Common White-Tern, to White Tern, removing an unneeded modifier. The English name of *Clangula hyemalis* has been changed from Oldsquaw to Long-tailed Duck to bring the English name into concordance with general usage in other parts of the English speaking world.

Warbling Silverbill (*Lonchura malabarica*) has been split in to two species, Indian Silverbill, (*Lonchura malabarica*) and African Silverbill (*Lonchura cantans*), based on Restall (1996). The Silverbill found in Hawai'i is now called the African Silverbill.

The Chestnut Mannikin (*Lonchura malacca*) has not only been split from Tricolored Munia (*Lonchura malacca*); but both the English and scientific names have been changed to Chestnut Munia (*Lonchura atricapilla*), following Restall (1996).

One of the more intriguing issues that this split brings up for birders in Hawai'i, is that both species have been reported from Hawai'i in the past. The supplement notes that the Tricolored Munia has been introduced and has become established on O'ahu.

Has anyone seen Tricolored Munia (formerly the *Lonchura m. malacca* race of the Chestnut Mannikin) in the Hawaiian Islands since Berger's report from the vicinity of the Waikiki aquarium in May 1970 (Berger 1972)? The illustrations in Restall (1996), Plate 8, page 38 show that it should not be particularly difficult to separate the darkest bellied form of Tricolored Munia from Chestnut Munia. All other forms of the Tricolored Munia are white-bellied, thus presenting no real field identification problems.

The committee on classification and nomenclature is also considering four other taxonomic changes directly related to birds known from Hawai'i. These are as follows: Splitting Newell's Shearwater (*Puffinus newelli*) from Townsend's Shearwater (*Puffinus auricularis*); separating Hudsonian Curlew (*Numenius hudsonicus*) from Whimbrel (*Numenius phaeopus*); splitting 'Elepaio (*Chasiempis sandwichensis*) into three species and lastly merging 'Amaui (*Myadestes oahuensis*) into Oloma'o (*Myadestes lanaiensis*).

Does Your Cat Eat Birds?

Volcano Watch - September 21, 2000

Cats have been our pets and rat-catchers since the dawn of civilization. Many of us grew up with cats or now keep them (including the authors of this column!). However, the number of domestic cats in the U.S. has more than doubled in the past 30 years, and they are becoming an increasing problem for wildlife. It's important to point out that we're talking about two sorts of cats, those that belong to someone vs. the homeless wild, or feral, ones.

Domestic cats were introduced to Hawai'i probably during the late 1700s, when sailing ships began regularly visiting the islands. Shipboard felines, brought along to keep the vessels clean of rodents, were given away or traded in port. By the 1800s, Mark Twain, for instance, noted that cats abounded in the islands. Contemporary naturalists also took notice and reported that cats were killing birds in the forest. Without cold winters to keep them home, cats had set up a life of their own far from the comforts of human care.

Cats are highly adaptable predators capable of killing a variety of animals and birds, and feral cats now inhabit every town, rural area, and forest in the islands, from the seashore to above timberline on the highest volcanoes. Here they encounter native birds that evolved without mammalian predators, and these birds are easy prey for cats. As early as 1903, naturalist R.C.L. Perkins noted

serious depredation of native birds on the island of Lana'i. Today, biologists studying native forest birds continue to document predation of nesting adults and chicks by feral cats high on the slopes of Mauna Kea, Mauna Loa, Haleakala, and in the Alaka'i swamp.

Seabirds are particularly vulnerable to cats because they nest on the ground. The last nesting colony of Dark-Rumped Petrels (Ua'u,) on the Big Island is near the 9,000-foot elevation on Mauna Loa, and even at these barren, chilly heights, predation of adult Ua'u by cats is a serious problem. Most seabirds now nest on offshore islands, where cats and mongooses can't get them.

It's common knowledge that cats roam, but a recent study of radio-collared feral cats on Mauna Kea documented an average home range of 13.9 square miles! Average daily movement was about half a mile per day. One cat moved 25 miles within a 23-day period. An analysis of the stomach contents of 37 feral cats from Mauna Kea reported a diet of birds, insects, mice, and rats. Birds were found in 78% of the samples, and small songbirds were more than twice as common as game birds.

Recently, some people have advocated supporting managed cat colonies in public places to control rodent populations, but they have not considered the impacts these colonies can have on our birds. Most cats will wander and hunt whether they are fed or not, and cats don't

eat just rats and mice. One cat from a managed colony could be responsible for repeated killings in a seabird colony or eating an entire brood of endangered Hawaiian Stilts in our wetlands. Feral cats also carry diseases, like toxoplasmosis, that can harm humans as well as kill birds.

It is costly and time-consuming to remove cats from remote areas, yet this may be one of the best ways to protect some seabird colonies. Our native birds face many problems in addition to predators. Habitat loss and avian disease have also contributed to the decline of native birds. Birds are an important part of the ecosystem and lift our senses with their song in our neighborhoods or on hikes in the forest.

Wild cats, and pet cats that are allowed to roam free, can have serious impacts on our bird populations. Some of the things that you can do to limit their access to birds include keeping your cat indoors (for more information, see www.abcbirds.com), having your cat spayed or neutered, and taking stray cats to your local humane society.

Volcano Watch is a weekly feature provided by scientists at the U.S. Geological Survey.

*U.S. Geological Survey
Hawaiian Volcano Observatory
PO Box 51, Hawaii National Park, HI
96718. Phone (808) 967-7328 FAX
(808) 967-8890*

Please Help With Our Annual Mailing!

Saturday, November 18th, 10 a.m. to 4 p.m. at the HAS office

Can you spare a couple of hours to stuff and seal envelopes so that you and your fellow members can receive 2000 HAS ballots, local membership renewals, and the President's annual report/appeal??

YOU WILL BE REWARDED with PIZZA, refreshments, good company, and endless gratitude!

Please call Linda Shapin at the HAS office : 528-1432 and let her know when you can come by on that day.

Birder's Dreams

by Jason Berry, Director, Guatemala Birding Resource Center

Birders often dream of birding far away, exotic destinations for vacation. As your average run-of-the-mill birder, I too dreamed these dreams while typing away at the office. Unfortunately, for most of us the reality is often much less thrilling. But in 1999 all my dreams came true!

My wife and I had to return to Guatemala for her to finish up medical school. I had lived there previously and had always wanted to return. My plan was to work with the local bird observatory, or Audubon Society. As it turned out there were no birding observatories, and the Audubon Society changed its name and affiliation with AS in the United States. I was lost!

In the United States I had enjoyed the support of the informal birdwatching infrastructure and community. But here in Guatemala, I was standing in gorgeous Cloud forest, but with no one to debate the differences between the confusing female hummers. I was knee-high in a coastal marsh, but with no rarebird hotline to report the first country record of Fulvous whistling Duck! The lush

montaine jungles of the pacific foothills teemed with resplendent Quetzals, Azure-rumped Tanagers, and blue-tailed hummingbirds, but who was I going to share this birding excitement with? In a word the birding infrastructure, community was NONEXISTENT! Then while looking at a particularly beautiful pink-headed warbler it came to me. Why not open Guatemala up to birding by creating an organization dedicated to catering to birders' needs?

Almost two years later with lots of hard work and birding behind me, no birder need visit Guatemala and feel as lost and disorientated as I did. The Guatemala Birding Resource Center ("GBRC") now provides local (we found a few!) and visiting birdwatchers resources such as checklists, field guides, binoculars, a birder's resource library, tours, and information! Tours focus on Mundo Maya endemics, e.g. Horned Guan, Azure-rumped Tanager, Rufous Saberwing, and black-capped Sisikin. Proceeds from the tours go to support the work of two recently hired GBRC research associates who are researching

life histories of the many unstudied birds of the country. This last high season saw more than three tours a week, countless rare bird sightings, and satisfied birders from all over the world. GBRC is a success - the dream came true!

Although most birders will never have the chance to found their own birding organization, there are many other ways to deepen your birding experience. Taking your interest in birding one step farther and volunteering for the Christmas and Spring bird counts can definitely enrich your birding. Taking on a little bit more may find you with your own Summer Breeding Bird Survey area, or banding birds on a birdy weekend in the fall. Volunteering for national or international conservation organizations can afford unimaginable birding experiences! My story isn't so much about Guatemala or GBRC, but that we birders can make our birding dreams come true if we take that next step! Who knows, maybe the next Hermit or Worming-eating Warbler you band might be seen on one of our tours! *You can email Jason at <http://xelapages.com/gbrc>*

Volunteer Field Research Position

The U.S. Fish and Wildlife Service, Pacific Remote Islands National Wildlife Refuge (NWR) Complex, is looking for a few good volunteers for the Tern Island and Laysan Island field stations. These islands are part of the Hawaiian Islands NWR and are essential nesting areas of 20 species of seabirds and Hawaiian green sea turtles and are the principle pupping grounds for the Hawaiian monk seal. Tern and Laysan Islands are located 700 and 1000 miles, respectively, northwest of the main Hawaiian Islands.

Work at the stations includes monitoring and banding migratory and resident seabirds, shorebirds, and endangered land birds, alien plant eradication, native plant propagation and out-planting, at times some sea turtle work, data collection and entry, and up to 50% facilities and equipment maintenance. The work is

intensely physical with harsh conditions of rain, direct sun and wind for long periods of time. We expect a 3-6 month commitment from volunteers. Room and board is paid for by USFWS. Living conditions are very basic, consisting of tent or bunkhouse communal camps.

Outside contact while on the islands is limited, due to the remote locale, to radio communication and sporadic mail (Tern only). We are looking for volunteers who have a biology or maintenance background (or both). Field experience is preferred but not always necessary. We place around 12 volunteers each year.

For an information packet about the volunteer positions and greater detail on duties for each station as well as how to apply, please contact Dominique Aycock at (808) 541-1201, Dominique_Aycock@fws.gov, or at PO Box 50167, Honolulu, HI 96850

Reminder: HAS Annual Awards Dinner on Nov. 2

Join us for our annual awards banquet on Thursday, November 2, 2000 from 6pm until 9pm at McCoy Pavilion, Ala Moana Park. Rick Warshauer, US Fish & Wildlife Service Deputy Project Leader for Hawaiian and Pacific Refuges, will give a slide show entitled:

"Palmyra: A New Pacific Refuge?"

Food and beverages will be provided by the Society. Admission will be \$5.00. Please RSVP by calling the HAS office at 528-1432 before October 27th.

Christmas Bird Count 2000-2001

The Christmas Bird Count is an annual bird census. Volunteers count every bird and bird species over one calendar day. Birds are indicators of the overall health of the environment. Christmas bird count data in any given area can provide valuable insight into the long-term health of bird populations and the environment.

Over 45,000 people from all 50 states,

every Canadian province, the Caribbean, Central and South America and the Pacific Islands participate in more than 1,700 counts held during a two and a half week period!

Join our Christmas Bird Counts during the official count period, this year from December 15 to January 5, 2001. If you want to do something good for birds

and meet other "bird people," call one of the coordinators to sign up. There is a \$5.00 charge per person to support compiling and publication of the nationwide results. Note: Special information is needed by the coordinator of the popular "Kulani Prison" count, so call the Big Island Volcano coordinator by December 1 to ensure your spot.

<u>Island</u>	<u>Date</u>	<u>Coordinator</u>	<u>phone #/email</u>
Kaua'i			
* Waimea	12/30	Michelle Ho'okano Marsha Ericson Koke'e Natural History Museum	808-335-9975
Kapa'a		Barbara Stuart	808-826-9233
O'ahu			
Honolulu	12/17	Arlene Buchholz	988-9806 or snovakz@juno.com
Waipi'o	12/16	David Bremer	623-7613
Maui			
Pu'u O Kaka'e (East Maui)	12/17	Lance Tanino	808-280-4195 or lancemanu@hotmail.com
'Iao Valley (West Maui)	12/16	same as above	same as above
Moloka'i			
Kualapu'u	**	Arleone Dibben-Young	808-553-5992 or nene@aloha.net
Hawai'i Island			
Kulani Prison (Volcano)	**	Larry Katahira Nick Shima	808-985-6088
North Kona	**	Reggie David	808-329-9141 or rdavid@kona.net

* There is a forest bird count meeting at the park at 7 a.m. and a shoreline portion of the Waimea count meeting at 7 a.m. at the Lucy Wright park in Waimea. There will be a Bird ID meeting for all interested people free of charge on December 27 at the Waimea neighborhood center at 7 p.m.

** date not decided yet

Field Trips for 2000/2001

All trips with an * are still in the process of being planned. Details will be provided as the scheduled dates get closer. A donation of \$2.00 per participant on all field trips is appreciated.

November 25th 'Ewa Plains Sinkholes to look for fossils of extinct Hawaiian birds with Dr. Alan Ziegler, who will lead us on a short walk from the Barber's Point Deep Draft Harbor to the sinkholes, sharing information about the geology along the way. Carpool at 8am on the Punchbowl side of the State Library at King Street or meet at the Harbor on Malakole Road at 9am. Bring hat, sunscreen, water, and, if you like, a picnic lunch to eat at Barber's Point Beach Park. To register, please call Mary Gaber at 247-0104

December* - Christmas Bird Count - See article above for details.

January 20 or 21* - A different sort of field trip to Waikiki's Hilton Hawaiian Village! Tour the exotic bird collection with a guide from Hilton's Wildlife Department. There is an extensive variety of birds from all over the world including swans, penguins, flamingos, cranes, ibises, Mandarin ducks, cockatoos and parrots.

February 17 or 18* - Go behind the scenes at Sea Life Park and learn about the Seabird Rehabilitation program. Meet convalescent and non-releaseable seabirds up close.

Avian Botulism Strikes Kealia Pond, Maui

During the past 10 days (October 2-12), more than 50 wetland and shore birds, many of them endangered species, have died at Maui's Kealia Pond National Wildlife Refuge due to an outbreak of avian botulism. The disease, which does not affect humans, is caused by a bacteria common in Hawai'i's soils that produces a toxin when certain conditions are present, usually stagnant water, warm temperatures, and decaying vegetation.

"Thanks to several volunteers, we have been able to search the pond area several times a day to remove dead birds and to bring weak birds into a makeshift 'bird hospital' for rehabilitation," said Glynnis Nakai, refuge manager. "We're nursing 10 birds right now with the help of State Veterinarian Dr. Greg Massey. We'll continue to make our rounds until we're sure the outbreak is over."

By Wednesday, 29 Hawaiian coots, 1 Hawaiian stilt, 29 koloa (Hawaiian ducks) or hybrids, and 9 shorebirds had died from the disease. Hawaiian coots, Hawaiian stilts, and koloa are all endangered species.

Avian or type C botulism is one of several types of the disease, but it has never been known to be a threat to humans. "Humans are much more suscep-

tible to types A and B, which are usually caused by improperly processed foods," explained Dr. Thierry Work of the National Wildlife Health Research Center's Honolulu office. "In fact, a person would have to drink gallons of water contaminated with type C botulism or eat thousands of infected invertebrates to show any symptoms of the disease."

Birds are infected when they eat toxin-laden invertebrates. While the invertebrates are immune to the toxin, botulism paralyzes the voluntary muscles in birds, leading to drowning or asphyxiation.

"This has hit us at a terrible time of year, with the fall migration bringing more and more shorebirds to the refuge," said Nakai. "Soon, waterfowl such as Northern shovelers and pintails will be arriving after flying up to 2,400 miles across the ocean. We certainly don't want to attract them into Kealia Pond while the botulism is present, so we're keeping the pumps running in the smaller aquaculture ponds where better circulation keeps toxin levels down and turning off the pumps that deliver water to the main pond, where the majority of the dead birds have been found."

Refuge staff will be exploring options to reduce levels of silt that winds may blow from the pond as it dries.

"Although we were keeping the water levels as high as possible to eliminate blowing dust, we have no choice at this point but to change the current conditions in the main pond," Nakai said. "I want to assure our neighbors that we will do everything possible to minimize the blowing silt."

Both Nakai and Work emphasize that type C botulism is not a threat to humans. "In fact," Nakai said, "we're looking for more volunteers to help us through this crisis. We've already had great support from local veterinarians and the community, Ducks Unlimited, and the staff at Haleakala National Park, but caring for the sick birds and trying to bring in those exhibiting early signs of the disease before they die is a major undertaking. The more helping hands we have, the better."

Volunteers may call Kealia Pond National Wildlife Refuge at 808-875-1582 for more information.

This is the first major outbreak of avian botulism at Kealia Pond since the refuge was established in 1992. Last year, the refuge served as the rehabilitation site for sick birds from Kahului after an outbreak of botulism in Kanaha Pond. Source: USFWS News Release dated October 12, 2000
Contact: Barbara Maxfield, 808-541-2749 or 342-5600

Hawai'i's Seabirds Need Your Help

Volunteers are still needed to assist with the recovery of Hawai'i's seabirds. Activities that are planned for this fall include establishing a volunteer network to assist the State Division of Forestry and Wildlife in recovering newly fledged shearwater chicks. During October and November these chicks fledge from their underground nests. On their maiden flight the birds are supposed to fly out toward the ocean; instead many are distracted by the urban lights and "fall out" onto roadways, lanais, and industrial areas. A network of volunteers is being established to survey local beaches for birds that are weak and wash up on shore and to assist with retrieving the birds that "fall out" into the unsafe areas. If you are interested in participating, please call Sharon Reilly of Hui Malama Na Manu Kai at 386-7029 or send an email message to Shareilly@aol.com. The Hui was formed as a joint effort between the Hawaii Audubon Society and the National Audubon Society and includes members of the Audubon Society, State and Federal resource managers and other concerned members of the community.



Wedge-tailed Shearwaters in an underground nest.

Photographer unknown



NOVEMBER 2000

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Calendar of Events

Thursdays, November 2 and December 7: Education Committee monthly meeting, 7 p.m. at BaLe Sandwich Shop in Manoa Marketplace (near Safeway). For more information, call chairperson Wendy Johnson, 261-5957.

Mondays, November 13 and December 4: Conservation Committee monthly meeting at the HAS office at 5:45 p.m. For more information, call chairperson Dan Sailer, 455-2311.

Mondays, November 13 and December 4: HAS Board meeting, always open to all members, 6:30 to 8:30 p.m. at the HAS office.

November 2: Annual Awards Dinner at McCoy Pavilion. See page 79.

November 18: Annual Mailing at office. See page 78.

November 25: Field Trip to 'Ewa Plains Sinkholes to look for fossils of extinct Hawaiian Birds. See page 80.

December 11: Annual Meeting and Program Results of Board Elections will be announced. Program still being planned.

December 14 to January 4: Annual Christmas Bird Count. See page 80.

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